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# SINGLE MODE VERTICAL CAVITY SURFACE EMITTING LASER

## ABSTRACT OF THE DISCLOSURE

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A surface emitting laser with spatially varying optical loss to provide single mode operation. The optical loss may be introduced with an anti-phased ohmic contacts. Current injection may be constricted to a diameter that is different than the diameter of the ohmic aperture, allowing for optimization of carrier profiles for high-speed performance. Methods for index guiding are introduced to further the reproducibility of the invention.

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